

REMARKS

The Examiner has rejected claims 1-8, 10-17, 19-22, 25, 27, and 29-31 under 35 U.S.C. 103(a) as being unpatentable over Adiwoso et al U. S. 5,963,862 in view of Kikinis U. S. 6,205,485.

The Examiner states regarding claims 1 and 25, Adiwoso et al teaches a data transmission system (i.e., illustrated in Figs. 1 and 12) comprising: a two-way communication link (25) comprising at least one satellite (i.e., satellites 12, 13) at least one user terminal (20) having two-way communication with the two-way communication link (25); and comprising inherently a memory for storing data broadcast by way of the satellite of the two-way communication link (i.e., huge amount of information (gigabytes) flowing in the forward link from satellite to the terminal), directing Applicants' attention to col. 5, lines 59-67, a software which retrieves information requested by way of the user terminal and information related to the requested information (i.e., terminal 20 typically a software to perform the function of multimedia terminal), directing Applicants' attention to col. 5, line 33 to col. 6, line 36; and at least one gateway (30 or 300) having access to data (i.e., access information on Internet and having two-way communication with the two-way communication link), directing Applicants' attention to Figs. 1 and 2, links 45, 46.

The Examiner goes on to say, however, that Adiwoso et al does not specifically teach the terminal having a cache for caching broadcasted data from the satellite.

However, the Examiner contends, the preceding limitation is known in the art of communications and cites Kikinis teaching a communication terminal (e.g., a set box) which receives a video stream from satellite 113 via a special driver and put into a cache, which is considered as part of memory system (col. 6, lines 60-67). Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the cache taught by Kikinis within the system of Adiwoso et al in order to store the programming pages in the cache of memory system. Further, the Examiner submits those pages found in the cache do not have to be searched from the Internet by modem, but can be taken directly out from the cache, directing Applicants' attention to col. 7, lines 5-25.

Applicants respectfully submit that in Adiwoso et al U. S. 5,963,862 there is disclosed "An integrated telecommunications system provides fixed and mobile satellite-based services via one or more geosynchronous satellites. Two-way user links are provided by the satellites to user terminals located throughout a geographical region. Additionally, the satellites provide two-way access links to gateway stations within the region, and also to a satellite network control center. The network control

"center controls bandwidth and power of the satellites to establish the user links and the access links. A mobile cellular telephone network provides mobile cellular telephone service to a subscriber that also has a user terminal. A gateway station includes a gateway station controller coupled to a mobile switching center, which, in turn, is coupled to a terrestrial network. The gateway station controller provides control signals route calls to either the user terminal or the mobile cellular telephone of the subscriber based on a single dialed number."

Applicants respectfully submit that at col. 5, lines 59-67 of Adiwoso et al there is disclosed "For example, in the situation where a user requests on-demand Internet access through the satellite, there is usually a huge amount of information (gigabytes) flowing in the forward link from the satellite to the user terminal, with very little information (kilobits) being sent via the return link. In response to such demands, the NCC can allocate a large information transfer bandwidth for the forward link, and, at the same time, allocate a narrow bandwidth for transmissions in the opposite direction (i.e., the return link)."

Applicants respectfully contend in col. 5, line 33 to col. 6, line 36 there is a wide ranging discussion of Fig. 1, illustrating a number of user terminals that may be employed and their configuration with other devices at the user's premises depending on the desired range of services. There is a further discussion of asymmetrical links which are created when unequal bandwidths are allocated between the forward link and the return link of a telecommunication. There is further discussed the invented telecommunication system that can literally accommodate millions of users each of which may request any of a broad range of services.

Applicants respectfully submit that no where in col. 5, lines 59-67 or col. 5, line 33 to col. 6, line 36 nor in Figs. 1 and 2 focusing on links 45 and 46 is there disclosed the cache for selectively caching data broadcasts by way of the satellite of the two-way communication link, nor is there disclosed software which retrieves information requested by way of the user terminal and information related to the requested information.

In Kikinis U. S. 6,205,485 there is disclosed "A multimedia broadcast system provides program schedule information simulcast as a Hyper Text Markup Language (HTML) data stream including commands and displayable, selectable indicia associated with the commands, along with programs for display. A set top box is adapted to separate the HTML data stream and to store that data in a cache as WEB pages retrievable by a WEB browser in the set top box, whereupon the program schedule information is displayed including the displayable, selectable indicia. Selecting the indicia directs the set top box via the associated command to tune to a

"program associated with the displayable indicia. The indicia may be any text, icon, dynamic figurine, and the like. In a preferred embodiment program schedule WEB pages, including the commands and displayable indicia, are stored especially marked on a WEB server coupled to the Internet and to a scanner adapted to scan the WEB server for marked pages, and to upload the marked pages to a satellite broadcast system."

Applicants respectfully submit that in Kikinis at col. 6, lines 60-67 there is disclosed "In the system as shown in Fig. 2 this data stream is from decoder 161 to sound and video controllers 162 and 163, and on to TV 122, for example, via port 150 and link 132. Demux 310 is adapted as well to provide a separate data stream 312 comprising the especially marked and tagged WEB pages scanned from database 100 by Simulcast scanner server 110. This data stream is delivered via a special driver 320 and put into a cache 322, which may be considered a part of memory system 166 in Fig. 2."

Further, at col. 7, lines 5-25 Applicants note inter alia that "those pages found in the cache do not have to be searched from the Internet by modem 167, but can be taken directly out of the cache."

Applicants respectfully submit that no where in Adiwoso et al, directed to an integrated telecommunications system providing fixed and mobile satellite based services via one or more geosynchronous satellites employing two-way user links to user terminals located throughout a geographical region which provide two-way access links to gateway stations within the region and also to a satellite network control center, is there any suggestion or implication that it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the cache taught by Kikinis, directed to a multimedia broadcast system providing program schedule information simulcast as a Hyper Text Markup Language (HTML) data stream including commands and displayable selectable indicia associated with commands along with programs for display, within the system of Adiwoso et al in order to store the programming pages in the cache of memory system. Further, Applicants respectfully contend that Kikinis no where remedies the obvious deficiencies of Adiwoso et al with regard to the requisite cache as described in addition to the software which retrieves information requested by way of the user terminal and information related to the requested information. Applicants respectfully submit, by virtue of the obvious deficiencies in Adiwoso et al as recited above with regard to the cache and software and the failure of Kikinis to remedy these deficiencies even if improperly combined with Adiwoso et al as suggested by the Examiner, this ground of rejection must fail.

The Examiner goes on to say regarding claim 2, Adiwoso et al in view of Kikinis teaches all the limitations and further that Adiwoso et al teaches the two-way communication link comprises a low bandwidth two-way communication link, directing Applicants' attention to col. 6, lines 35-40. Applicants respectfully submit that in Adiwoso et al at col. 6, lines 35-40 there is disclosed "Satellite 12 provides user links into eight coverage beams at Extended C-Band radio frequencies. All of the user links are two-way, with the uplink (user-to-satellite) connection being provided in the frequency range of 6425-6725 MHz, and the downlink (satellite-to-user) connection being provided in the frequency range 3400-3700 MHz."

Although Applicants do not necessarily agree that Adiwoso et al at col. 6, lines 35-40 teaches the two-way communication link comprising a low bandwidth two-way communication link as contended by the Examiner and required by claim 2, Adiwoso et al in view of Kikinis does not teach all the limitations of claim 2 for reasons discussed above which are hereby respectfully incorporated by reference.

The Examiner further states regarding claims 3, 5 and 7, Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al teaches the two-way communication link comprises a Ku-band and Ka-band, directing Applicants' attention to col. 6, lines 63-67.

Applicants respectfully submit that in Adiwoso et al at col. 6, lines 63-67 there is disclosed "Whereas the problem known as 'rain fade' is common in satellite telecommunications systems utilizing Ka-Band frequencies (-20-30 GHz) and Ku-Band frequencies (-10-20 GHz), with Extended C-Band this problem is virtually non-existent."

Applicants respectfully submit that although they do not necessarily agree as the Examiner contends that Adiwoso et al teaches the two-way communication link comprising a Ku-band and Ka-band at col. 6, lines 63-67 but appears to be directed to the problem of rain fade in satellite telecommunications systems using Ka-band and Ku-band frequencies with extended C-band, this ground of rejection fails for the reasons set out above with regard to the deficiencies of both Adiwoso et al and any improper combination with Kikinis, which reasons are hereby respectfully incorporated by reference.

The Examiner goes on to say with regard to claim 4, Adiwoso et al in view of Kikinis teaches all the limitations of claim 4 and, in addition, Adiwoso et al further teaches the two-way communication link comprises a high bandwidth data broadcast link, directing Applicants' attention to col. 6, lines 41-45. Applicants respectfully contend that in Adiwoso et al at col. 6, lines 41-45 there is disclosed "A single beam access link is provided at X-Band radio frequencies in which the uplink frequency is in

"the 7900-8400 MHz and the 'downlink' frequency range is 7250-7750 MHz. Each of the seven user link spot beams is aimed over a particular coverage area of the larger geographical region covered by the Asia beam."

Although Applicants do not necessarily agree that Adiwoso et al at col. 6, lines 41-45 teaches the two-way communication link comprising a high bandwidth data rate as claimed in claim 4, this ground of rejection nevertheless fails since Adiwoso et al in improper combination with Kikinis does not render claim 4 obvious as contended by the Examiner for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

The Examiner goes on to say regarding claims 6 and 8, Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al teaches the Ku-band and Ka-band provide a plurality of spot beams that covered selected coverage regions, directing Applicants' attention to col. 7, line 62 to col. 8, line 9.

Applicants respectfully submit that at col. 7, line 62 to col. 8, line 9 in Adiwoso et al there is disclosed "The large ASIA beam provides universal connectivity of any earth station to any other earth station. This feature has utility for interstation signaling and messaging between individual gateways and between gateways and the NCC. It also enables direct connection between user terminals located in different spot beams, i.e., spot-to-spot routing. That is, there is no need for interbeam connectivity between spot beams in the telecommunications system of the present invention. Direct connections of this type could only be accomplished in past systems by means of a double satellite hop (involving long, annoying delays) or complex on-board satellite technology, as is typically required in handheld mobile satellite systems such as ACeS™, and in higher frequency Ku-Band and Ka-Band systems (such as Spaceway™).

Applicants respectfully contend that the recited passages asserted by the Examiner directed to annoying or complex on-board satellite technology....and in higher frequency Ku and Ka-band systems...does not in any way render obvious the requirement in claim 6 requiring a Ka-band communication link providing a plurality of spot beams that cover selected coverage regions nor the Ku-band communication link required in claim 8 which broadcasts a wide area coverage beam to allow the requested information to be received by multiple user terminals. Further, this combination as recited above with regard to claim 1 and other independent claims has been seen to be ineffective to render obvious claims 6 and 8 for the reasons recited with regard to claim 1 set out above which reasons are hereby respectfully incorporated by reference.

The Examiner goes on to state regarding claims 10 and 27, Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al further teaches the gateway (30) typically comprises a storage device, but not a cache. However, the Examiner contends, the use of cache as part of memory system is disclosed in the system of Kikinis (at col. 6, lines 65-67). Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the cache taught by Adiwoso et al as part of the memory system in order to store video data received from the satellite.

Applicants respectfully contend that at col. 6, lines 65-67 of Kikinis there is disclosed "This data stream is delivered via a special driver 320 and put into a cache 322, which may be considered a part of memory system 166 in Fig. 2."

Applicants respectfully contend that at col. 4, lines 50 et seq of Adiwoso et al there is disclosed "each of the gateways 30 is coupled to a subscriber database 35 that stores user information. (Note that for simplicity purposes, only one gateway, 30a, is shown in Fig. 1.) This information may include a list of user locations, system configurations, billing information, etc." Applicants respectfully contend that it is not at all apparent that the subscriber database 35 of Adiwoso et al that stores information is in any way suggestive of the memory system 166 disclosed in Kikinis. Applicants further contend that Kikinis, in addition to the deficiency, may not be properly combined with Adiwoso et al to render claims 10 and 27 obvious under 35 U.S.C. 103 as contended by the Examiner since as recited above such a combination is improper and can only be suggested to one of ordinary skill in the art by reading Applicants' specification. Finally, as Applicants have above contended, claims 10 and 27 are not rendered obvious under 35 U.S.C. 103(a) over Adiwoso et al in view of Kikinis for the deficiencies cited with regard to both Adiwoso et al and Kikinis above relating to claim 1 which reasons are hereby respectfully incorporated by reference.

The Examiner states that regarding claims 11 and 29, Adiwoso et al in view of Kikinis teaches all the limitations as recited in claim 1 and 25 above and that Adiwoso et al further teaches generating requests for data at the at least one user terminal, directing Applicants' attention to col. 9, lines 60-67; transmitting the requests for data from the at least one user terminal by way of the two-way communication link to the at least one gateway, directing Applicants' attention to col. 9, lines 60-63, col. 10, lines 16-43; obtaining the requested data at the least one gateway, directing Applicants' attention to col. 10, lines 27-57; and transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link, directing Applicants' attention to col. 10, lines 27-57.

Applicants respectfully contend that at col. 9, lines 60-67 there is disclosed "Dialing of the telephone number causes a signal to be transmitted from user terminal 20a to NCC 50 via satellite 12 (see Fig. 1). In this particular embodiment, each user terminal has a unique identification number and is also uniquely assigned to one particular gateway in the geographical region. This gateway is known as the user's 'home' gateway. The user's identification number is included in the initial signal transmission from the user terminal." Applicants are at a loss to understand how this discloses requests for data at the at least one user terminal as required by claims 11 and 29 as the Examiner contends.

Applicants respectfully submit that at col. 9, lines 60-63 and col. 10, lines 16-43 there is a broad ranging discussion relating to whether the call should be routed through the user's home gateway through another gateway or directly to another user. There is also discussion with regard to the termination of the optimum route for the call in terms of minimized call charges, circuit availability, designation connections, etc. Applicants respectfully contend that there is no suggestion or implication as contended by the Examiner of transmitting the request for data from the at least one user terminal by way of the two-way communication link to the at least one gateway as required by claims 11 and 29.

Applicants respectfully contend that at col. 10, lines 27-57 there is disclosed the determination of the optimum route for the call in terms of minimized call charges, etc. as above recited in addition to the application for direct user-to-user calls where the voice data information is routed directly between two user terminals through user links only. An access link is also disclosed allocated by NCC 50 for user-to-user calls to enable the gateway to extract certain information from the call and also so that the gateway can insert whatever signaling information it needs to insert into the call. Applicants are at a loss to understand how this teaches obtaining the requested data at the at least one gateway as required by claims 10 and 27.

Applicants respectfully submit that at col. 10, lines 27-57 there is not disclosed transmitting the requested data from the at least one gateway to the at least one user terminal by way of the two-way communication link as required in claims 11 and 29. Further, Applicants respectfully contend that Adiwoso et al in improper combination with Kikinis is incapable of rendering claims 11 and 29 obvious under 35 U.S.C. 103 for the same reasons as recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Regarding claims 12-16, the Examiner further submits that Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al further teaches transmitting the requests for data comprises transmitting the requests for data by way

of low bandwidth communication link, low bandwidth satellite communication link, low bandwidth terrestrial communication link or low bandwidth wireless communication link and directs Applicants' attention to col. 4, line 31 to col. 5, line 53, and col. 6, lines 35-40.

Applicants respectfully submit that at col. 4, line 31 to col. 5, line 53 there is a wide ranging discussion of the functions of telecommunications satellite 12 in providing single or multi-beam user links that connect directly with user terminals 20 at user link frequencies...the satellite control facility may be integrated with or coupled to NCC 50, as shown in Fig. 1....each of the gateways 30 is coupled to a subscriber database that stores user information...which may include a list of user locations, system configurations, billing information, etc. In addition, there is disclosed in said passages that one of the important architectural features of the satellite based telecommunications system of the invention is the use of relatively large gateway and NCC stations in combination with smaller low-cost user terminals. Further, it is stated that several different types of user or subscriber terminals may be employed. A user terminal is disclosed being coupled to a variety of multimedia devices which can include a telephone, computer, interactive television and data telecommunication device.

At col. 6, lines 35-40 Applicants respectfully contend there is really disclosed user links in eight coverage beams as extended C-band radio frequencies which the satellite may provide and that all user links are two-way, with the uplink user-to-satellite connection being provided in the recited frequency ranges of 6425-6725 MHz, and the downlink being provided in the frequency range of 3400-3700 MHz.

Applicants respectfully disagree that these recitations as applied by the Examiner teach, suggest or imply the step of transmitting the request for data comprising transmitting the request for data by way of a low bandwidth communication link as required by claim 12; the low bandwidth communication link comprising a low bandwidth satellite communication link as required in claim 13; the low bandwidth communication link comprising a low bandwidth terrestrial communication link as required in claim 14; the low bandwidth communication comprising a low bandwidth wireless communication link as required by claim 15; and the transmitting of the requested data comprising transmitting the data by way of a low bandwidth communication link as required by claim 16. Further, Applicants respectfully submit for the reasons recited above with regard to claim 1 *Adiwoso et al* in view of *Kikinis* is incapable of rendering claims 12-16 obvious under 35 U.S.C. 103 for the reasons cited above which are hereby respectfully incorporated by reference.

Regarding claim 17, the Examiner contends that Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al further teaches transmitting the requests for data comprises transmitting the requests for data by way of high bandwidth data broadcast link, directing Applicants' attention to col. 5, lines 1-7 and col. 6, lines 41-47. Applicants respectfully submit that at col. 5, lines 1-7 of Adiwoso et al it is disclosed "Additionally, gateway 30a may provide a high-speed, broadband connection that allows user terminals to access information available on the Internet." And at col. 6, lines 41-47 there is disclosed "A single beam access link is provided at X-Band radio frequencies in which the uplink frequency is in the 7900-8400 MHz and the 'downlink' frequency range is 7250-7750 MHz."

Although Applicants do not necessarily agree that this teaches the high bandwidth data broadcast link as required in claim 17, nevertheless Adiwoso et al in view of Kikinis has been seen to be ineffective to render claim 17 obvious under 35 U.S.C. 103 for the same reasons recited above with regard to claim 1 which reasons are hereby respectfully incorporated by reference.

The Examiner goes on to say regarding claims 19 and 20, Adiwoso et al in view of Kikinis teaches all the limitations and Adiwoso et al further teaches obtaining the requested data at the at least one gateway using a user's request history to obtain the requested information which is equivalent to the step of obtaining the requested data at the at least one gateway comprises using a user's user profile to obtain the requested information (reads on the gateway is in communication with a billing function to generate data/bill related to specific subscriber unit for authorization purposes), directing Applicants' attention to col. 4, lines 50-60 and col. 5, lines 1-50.

Applicants respectfully submit that at col. 4, lines 50-60 there is described "each of the gateways 30 is coupled to a subscriber database 35 that stores user information....This information may include a list of user locations, system configurations, billing information, etc....The assignment of a home gateway to a particular user terminal may be based upon considerations such as proximity, ease of routing, cost factors, and so on." At col. 5, lines 1-50 is a wide ranging discussion of the architectural features of the satellite based telecommunications system including the use of relatively large gateway and NCC stations in combination with smaller low-cost user terminals. There is further discussed user terminal 20a shown to be coupled to a variety of multimedia devices that include telephones, computers, interactive television and data telecommunications devices. This system is to provide a great variety of services to numerous different system configurations.

Applicants respectfully disagree that this in any way teaches, suggests or implies the step of obtaining the requested data at the requested one gateway

comprising using a user's request history to obtain the requested information as required in claim 19 or the step of obtaining the requested data at the at least one gateway comprises using a user's user profile to obtain the requested information as required in claim 20. Further, Applicants respectfully submit that Adiwoso et al in any improper combination with Kikinis is ineffective to render claims 19 and 20 unpatentable under 35 U.S.C. 103 for the reasons cited above with regard to claim 1 which are hereby respectfully incorporated by reference.

The Examiner goes on to say regarding claim 21, Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al further teaches obtaining the requested data along with data related to the requested data at the at least one gateway, citing col. 4, lines 50-60 and col. 5, lines 1-50, and transmitting the requested and related data from the at least one gateway to the at least one user terminal by way of the two-way communication link, citing col. 5, line 33 to col. 6, line 3 and col. 10, lines 4-16.

Applicants respectfully submit that at col. 4, lines 50-60 and col. 5, lines 1-50 there is seen the discussion with regard to gateways coupled to a subscriber database as recited above and in col. 5, lines 1-50 there is wide-ranging discussion of the architectural features of the satellite based telecommunications system as recited above, both with regard to the discussion of claims 19 and 20, both of which are seen to be ineffective to teach, suggest or imply that the requested data along with the data related to the requested data at the at least one gateway is taught as required by claim 21. Applicants respectfully submit that at col. 5, line 33 to col. 6, line 3 and at col. 10, lines 4-16 there is seen discussion of multimedia system coverage for a geographical region which extends across Asia and Australia and user links into eight coverage beams at extended C-band radio frequencies; and random access channels are utilized by the user terminals to initiate calls where the user's terminal monitors the common channel signaling received from the NCC and transmits a call request on the random access channel indicated by the common channel signaling, respectively.

Applicants respectfully contend this in no way teaches, suggests or implies obtaining the requested data along with data related to the requested data at the at least one gateway and transmitting the requested and related data from the at least one gateway to the at least one user terminal by way of the two-way communication link as contended by the Examiner. Further, Adiwoso et al in view of Kikinis is ineffective to reject claim 21 under 35 U.S.C. 103 as contended by the Examiner for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

The Examiner further states regarding claim 22, Adiwoso et al in view of Kikinis teaches all the limitations and that Adiwoso et al further teaches storing the requested and related information at the gateway, directing Applicants' attention to col. 13, lines 38-54.

Applicants respectfully submit that at col. 13, lines 38-54 of Adiwoso et al there is disclosed "The gateway architecture of Fig. 8 includes a mobile switching center (MSC) 301 which comprises an ordinary part of a mobile cellular system.....As shown in Fig. 8, MSC 301 has access to subscriber database 35 which stores fixed and mobile subscriber data....Coupled to, or included within, database 35 are home and visitor location registers 303 and 302, respectively." Applicants respectfully contend that this in no way teaches storing the requested and related information at the gateway as required by claim 22 and therefore this basis of rejection falls. Furthermore, Applicants respectfully submit as recited above with regard to claim 1 that Adiwoso et al in any improper combination with Kikinis is ineffective to reject claim 22 under 35 U.S.C. 103 for the reasons cited above which are hereby respectfully incorporated by reference.

The Examiner goes on to say regarding claims 30-31, Adiwoso et al in view of Kikinis teaches all the limitations and that Kikinis further teaches the cache has a size on the order of 30 gigabytes or multi-gigabyte hard disk (i.e., inherently present in the cache memory to store huge amount of information forwarded from the satellite to the terminal), directing Applicants' attention to col. 6, line 41 to col. 7, line 16.

Applicants respectfully submit that in col. 6 at line 41 to col. 7, line 16 of Kikinis there is disclosed "running a Simulcast application according to an embodiment of the present invention scanning database 100 by scanning operation 101 and uploading especially marked Web content bearing, in many instances tags constituting commands for controlling functionality of a set top box in data stream 303 to a system modulator 305 where data stream 303 is multiplexed with the general broadcast stream...From mux 305 the combined data stream is uplinked to satellite 113 and then rebroadcast as stream 307 to any adapted systems...Demux 310 is adapted as well to provide a separate data stream 312 comprising the especially marked and tagged Web pages scanned from database 100 by Simulcast scanner server 110....The operating code provided to set top box 121 in an embodiment of the present invention includes a Web browser 324....That means that during normal operation, since the cache is being continuously replenished by stream 312, no programming would ever require a normal Internet connection."

Applicants respectfully contend that the synoptic recitations of this broad-ranging discussion can be seen as ineffective to teach the cache of the instant

invention wherein said cache has a size on the order of 30 gigabytes as required by claim 30 and wherein the cache comprises a multi-gigabyte hard disk drive as required by claim 31. As previously stated, Kikinis does little to cure the deficiencies of Adiwoso et al and in any improper combination of Adiwoso et al and Kikinis is ineffective to reject claims 30-31 under 35 U.S.C. 103 for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

The Examiner has rejected claim 28 under 35 U.S.C. 103(a) as being unpatentable over Adiwoso et al U. S. 5,963,862 in view of Kikinis U. S. 6,205,485, further in view of Stephens et al U. S. 6,519,262.

The Examiner states regarding claim 28, Adiwoso et al in view of Kikinis teaches all the limitations above except the terrestrial communication link for transmitting the requested data to the at least one user terminal in the event that the satellite broadcast link becomes inoperative. However, the Examiner contends, the preceding limitation is known in the art of communications and that Stephens et al teaches for satellite broadcast systems it is generally desirable to have complimentary terrestrial transmitters should the satellite transmitters fail, citing col. 2, lines 3-5. Therefore, according to the Examiner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement terrestrial transmitters taught by Stephens et al within the system of Adiwoso et al in view of Kikinis in order to avoid dropped calls and make the communications system more reliable.

Applicants respectfully submit that in Stephens et al '262 there is disclosed "A time division multiplex (TDM) communication system (10) for broadcasting to users. The TDM communication system (10) includes a first transmitter (14) which broadcasts a first signal into a first coverage area (30) and a second transmitter (16) which broadcasts a second signal into a second coverage area (30) which at least partially overlaps said first coverage area (30). The first transmitter (14) is allocated a first TDM time block (88) having a first guard time (48) and the second transmitter (16) is allocated a second TDM time block (88) having a second guard time (48). The first (88) and second time blocks (88) form at least a portion of a TDM repeat interval such that the first transmitter (14) broadcasts the first signal during the first TDM time block (88) and the second transmitter (16) broadcasts the second signal during the second TDM time block (88)."

Applicants respectfully submit that at col. 2, lines 3-5 of Stephens et al there is disclosed "Moreover, for satellite broadcast systems, it is also generally desirable to have complimentary terrestrial transmitters should the satellite transmitters fail."

Although Applicants do not necessarily agree that Stephens et al teaches that it is generally desirable to have complimentary terrestrial transmitters should the satellite

transmitters of those of the instant invention as claimed fail, nevertheless, there is no suggestion in either Adiwoso et al nor in Kikinis that they may be properly combined, no less that both of them may be properly combined with Stephens et al as the Examiner has done in an attempt to reject claim 28 under 35 U.S.C. 103. Furthermore, as previously stated, Stephens et al does not cure the deficiencies of Adiwoso et al in any improper combination with Kikinis so that this ground of rejection fails for the reasons recited above with respect to claim 1 which are hereby respectfully incorporated by reference.

Applicants gratefully acknowledge the allowance of claims 32 and 33 and that claims 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Applicants note that the Examiner's reasons for allowance of claims 23, 24, 32 and 33 are the same as recited in the previous Office Action (Paper #12).

Applicants respectfully submit that claims 23 and 24 are allowable for the reasons and arguments presented above and need not be written in independent form including all of the limitations of the base claim and any intervening claims as requested by the Examiner.

Applicants respectfully contend that in view of the above remarks all of the claims presently under prosecution have been shown to contain patentable subject matter and to be patentably distinguishable over the prior art of record, Adiwoso et al, Kikinis combined with Adiwoso et al which combination has been amply contested by Applicants for the reasons cited above and likewise the further combination with Stephens et al with regard to claim 28.

Applicants respectfully request that this application be reviewed and reconsidered in view of the above remarks and that a Notice of Allowance be issued at an early date.

Respectfully submitted,


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